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RAW SEQUENCE LISTING

DATE: 03/04/2003

PATENT APPLICATION: US/10/028,726

TIME: 07:48:25

Input Set : N:\CrF3\RULE60\10028726.RAW.txt

Output Set: N:\CRF4\03042003\J028726.raw

SEQUENCE LISTING

3 (1) GENERAL INFORMATION:

5 (i) APPLICANT: Lee, Wen-Hwa

6 Shepard, H. Michael

7 Gregory, Richard J.

8 Wills, Ken N.

9 Maneval, Daniel C.

10 Lee, Eva

11 Goodrich, David

12 Wang, Nan-Ping

14 (ii) TITLE OF INVENTION: Cell Cycle Controlling Compositions and
15 Methods of Use

17 (iii) NUMBER OF SEQUENCES: 2

19 (iv) CORRESPONDENCE ADDRESS:

20 (A) ADDRESSEE: Townsend and Townsend and Crew LLP

21 (B) STREET: Two Embarcadero Center, Eighth Floor

22 (C) CITY: San Francisco

23 (D) STATE: California

24 (E) COUNTRY: USA

25 (F) ZIP: 94111-3834

27 (v) COMPUTER READABLE FORM:

28 (A) MEDIUM TYPE: Floppy disk

29 (B) COMPUTER: IBM PC compatible

30 (C) OPERATING SYSTEM: PC-DOS/MS-DOS

31 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30

33 (vi) CURRENT APPLICATION DATA:

C--> 34 (A) APPLICATION NUMBER: US/10/028,726

C--> 35 (B) FILING DATE: 21-Dec-2001

W--> 41 (C) CLASSIFICATION: 435

103 (vii) PRIOR APPLICATION DATA:

39 (A) APPLICATION NUMBER: US/08/472,760

40 (B) FILING DATE: 07-JUN-1995

44 (A) APPLICATION NUMBER: US 07/951,947

45 (B) FILING DATE: 28-SEP-1992

48 (A) APPLICATION NUMBER: US 08/276,041

49 (B) FILING DATE: 14-JUL-1994

52 (A) APPLICATION NUMBER: US 07/764,714

53 (B) FILING DATE: 24-SEP-1991

56 (A) APPLICATION NUMBER: US 07/265,829

57 (B) FILING DATE: 31-OCT-1988

60 (A) APPLICATION NUMBER: US 08/225,099

61 (B) FILING DATE: 08-APR-1994

64 (A) APPLICATION NUMBER: US 08/079,207

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Input Set : N:\Cr3\RULE60\10028726.RAW.txt

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65 (B) FILING DATE: 17-JUN-1993
 68 (A) APPLICATION NUMBER: US 07/914,039
 69 (B) FILING DATE: 14-JUL-1992
 72 (A) APPLICATION NUMBER: US 07/550,877
 73 (B) FILING DATE: 11-JUL-1990
 76 (A) APPLICATION NUMBER: US 08/058,784
 77 (B) FILING DATE: 07-MAY-1993
 80 (A) APPLICATION NUMBER: US 07/906,008
 81 (B) FILING DATE: 26-JUN-1992
 84 (A) APPLICATION NUMBER: US 07/553,905
 85 (B) FILING DATE: 16-JUL-1990
 88 (A) APPLICATION NUMBER: US 08/306,513
 89 (B) FILING DATE: 13-SEP-1994
 92 (A) APPLICATION NUMBER: US 08/121,108
 93 (B) FILING DATE: 13-SEP-1993
 96 (A) APPLICATION NUMBER: US 07/956,472
 97 (B) FILING DATE: 02-OCT-1992
 100 (A) APPLICATION NUMBER: US 08/126,810
 101 (B) FILING DATE: 24-SEP-1993
 104 (A) APPLICATION NUMBER: US 07/778,510
 105 (B) FILING DATE: 17-OCT-1991
 107 (viii) ATTORNEY/AGENT INFORMATION:
 108 (A) NAME: Bastian, Kevin L.
 109 (B) REGISTRATION NUMBER: 34,774
 110 (C) REFERENCE/DOCKET NUMBER: 17726A-000410US
 112 (ix) TELECOMMUNICATION INFORMATION:
 113 (A) TELEPHONE: (415) 576-0200
 114 (B) TELEFAX: (415) 576-0300
 117 (2) INFORMATION FOR SEQ ID NO: 1:
 119 (i) SEQUENCE CHARACTERISTICS:
 120 (A) LENGTH: 2994 base pairs
 121 (B) TYPE: nucleic acid
 122 (C) STRANDEDNESS: single
 123 (D) TOPOLOGY: linear
 125 (ii) MOLECULE TYPE: DNA (genomic)
 128 (ix) FEATURE:
 129 (A) NAME/KEY: CDS
 130 (B) LOCATION: 139..2922
 131 (D) OTHER INFORMATION: /product= "RB protein"
 132 /note= "retinoblastoma (RB) gene"
 134 (ix) FEATURE:
 135 (A) NAME/KEY: -
 136 (B) LOCATION: 1273..2922
 137 (D) OTHER INFORMATION: /note= "truncated RB protein fragment
 138 p56-RB"
 140 (ix) FEATURE:
 141 (A) NAME/KEY: -
 142 (B) LOCATION: 2887..2922
 143 (D) OTHER INFORMATION: /note= "RB protein C-terminal peptide"

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146      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
148 TTCCGGTTTT TCTCAGGGGA CGTTGAAATT ATTTTGTAA CGGGAGTCGG GAGAGGACGG      60
150 GCGGTGCCCC GCGTGCGCGC GCGTCGTCCT CCGCGCGCT CCTCCACAGC TCGCTGGCTC      120
152 CCGCCGCGGA AAGGCGTC ATG CCG CCC AAA ACC CCC CGA AAA ACG GCC GCC      171
153           Met Pro Pro Lys Thr Pro Arg Lys Thr Ala Ala
154           1           5           10
156 ACC GCC GCC GCT GCC GCC GCG GAA CCC CCG GCA CCG CCG CCG CCG CCC      219
157 Thr Ala Ala Ala Ala Ala Ala Glu Pro Pro Ala Pro Pro Pro Pro Pro
158           15           20           25
160 CCT CCT GAG GAG GAC CCA GAG CAG GAC AGC GGC CCG GAG GAC CTG CCT      267
161 Pro Pro Glu Glu Asp Pro Glu Gln Asp Ser Gly Pro Glu Asp Leu Pro
162           30           35           40
164 CTC GTC AGG CTT GAG TTT GAA GAA ACA GAA GAA CCT GAT TTT ACT GCA      315
165 Leu Val Arg Leu Glu Phe Glu Glu Thr Glu Glu Pro Asp Phe Thr Ala
166           45           50           55
168 TTA TGT CAG AAA TTA AAG ATA CCA GAT CAT GTC AGA GAG AGA GCT TGG      363
169 Leu Cys Gln Lys Leu Lys Ile Pro Asp His Val Arg Glu Arg Ala Trp
170 60           65           70           75
172 TTA ACT TGG GAG AAA GTT TCA TCT GTG GAT GGA GTA TTG GGA GGT TAT      411
173 Leu Thr Trp Glu Lys Val Ser Ser Val Asp Gly Val Leu Gly Gly Tyr
174           80           85           90
176 ATT CAA AAG AAA AAG GAA CTG TGG GGA ATC TGT ATC TTT ATT GCA GCA      459
177 Ile Gln Lys Lys Lys Glu Leu Trp Gly Ile Cys Ile Phe Ile Ala Ala
178           95           100           105
180 GTT GAC CTA GAT GAG ATG TCG TTC ACT TTT ACT GAG CTA CAG AAA AAC      507
181 Val Asp Leu Asp Glu Met Ser Phe Thr Phe Thr Glu Leu Gln Lys Asn
182           110           115           120
184 ATA GAA ATC AGT GTC CAT AAA TTC TTT AAC TTA CTA AAA GAA ATT GAT      555
185 Ile Glu Ile Ser Val His Lys Phe Phe Asn Leu Leu Lys Glu Ile Asp
186           125           130           135
188 ACC AGT ACC AAA GTT GAT AAT GCT ATG TCA AGA CTG TTG AAG AAG TAT      603
189 Thr Ser Thr Lys Val Asp Asn Ala Met Ser Arg Leu Leu Lys Lys Tyr
190 140           145           150           155
192 GAT GTA TTG TTT GCA CTC TTC AGC AAA TTG GAA AGG ACA TGT GAA CTT      651
193 Asp Val Leu Phe Ala Leu Phe Ser Lys Leu Glu Arg Thr Cys Glu Leu
194           160           165           170
196 ATA TAT TTG ACA CAA CCC AGC AGT TCG ATA TCT ACT GAA ATA AAT TCT      699
197 Ile Tyr Leu Thr Gln Pro Ser Ser Ser Ile Ser Thr Glu Ile Asn Ser
198           175           180           185
200 GCA TTG GTG CTA AAA GTT TCT TGG ATC ACA TTT TTA TTA GCT AAA GGG      747
201 Ala Leu Val Leu Lys Val Ser Trp Ile Thr Phe Leu Leu Ala Lys Gly
202           190           195           200
204 GAA GTA TTA CAA ATG GAA GAT GAT CTG GTG ATT TCA TTT CAG TTA ATG      795
205 Glu Val Leu Gln Met Glu Asp Asp Leu Val Ile Ser Phe Gln Leu Met
206           205           210           215
208 CTA TGT GTC CTT GAC TAT TTT ATT AAA CTC TCA CCT CCC ATG TTG CTC      843
209 Leu Cys Val Leu Asp Tyr Phe Ile Lys Leu Ser Pro Pro Met Leu Leu
210 220           225           230           235
212 AAA GAA CCA TAT AAA ACA GCT GTT ATA CCC ATT AAT GGT TCA CCT CGA      891

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213	Lys	Glu	Pro	Tyr	Lys	Thr	Ala	Val	Ile	Pro	Ile	Asn	Gly	Ser	Pro	Arg	
214					240					245					250		
216	ACA	CCC	AGG	CGA	GGT	CAG	AAC	AGG	AGT	GCA	CGG	ATA	GCA	AAA	CAA	CTA	939
217	Thr	Pro	Arg	Arg	Gly	Gln	Asn	Arg	Ser	Ala	Arg	Ile	Ala	Lys	Gln	Leu	
218				255					260						265		
220	GAA	AAT	GAT	ACA	AGA	ATT	ATT	GAA	GTT	CTC	TGT	AAA	GAA	CAT	GAA	TGT	987
221	Glu	Asn	Asp	Thr	Arg	Ile	Ile	Glu	Val	Leu	Cys	Lys	Glu	His	Glu	Cys	
222			270					275					280				
224	AAT	ATA	GAT	GAG	GTG	AAA	AAT	GTT	TAT	TTC	AAA	AAT	TTT	ATA	CCT	TTT	1035
225	Asn	Ile	Asp	Glu	Val	Lys	Asn	Val	Tyr	Phe	Lys	Asn	Phe	Ile	Pro	Phe	
226		285					290					295					
228	ATG	AAT	TCT	CTT	GGA	CTT	GTA	ACA	TCT	AAT	GGA	CTT	CCA	GAG	GTT	GAA	1083
229	Met	Asn	Ser	Leu	Gly	Leu	Val	Thr	Ser	Asn	Gly	Leu	Pro	Glu	Val	Glu	
230	300					305					310					315	
232	AAT	CTT	TCT	AAA	CGA	TAC	GAA	GAA	ATT	TAT	CTT	AAA	AAT	AAA	GAT	CTA	1131
233	Asn	Leu	Ser	Lys	Arg	Tyr	Glu	Glu	Ile	Tyr	Leu	Lys	Asn	Lys	Asp	Leu	
234				320						325					330		
236	GAT	GCA	AGA	TTA	TTT	TTG	GAT	CAT	GAT	AAA	ACT	CTT	CAG	ACT	GAT	TCT	1179
237	Asp	Ala	Arg	Leu	Phe	Leu	Asp	His	Asp	Lys	Thr	Leu	Gln	Thr	Asp	Ser	
238				335					340						345		
240	ATA	GAC	AGT	TTT	GAA	ACA	CAG	AGA	ACA	CCA	CGA	AAA	AGT	AAC	CTT	GAT	1227
241	Ile	Asp	Ser	Phe	Glu	Thr	Gln	Arg	Thr	Pro	Arg	Lys	Ser	Asn	Leu	Asp	
242			350					355					360				
244	GAA	GAG	GTG	AAT	GTA	ATT	CCT	CCA	CAC	ACT	CCA	GTT	AGG	ACT	GTT	ATG	1275
245	Glu	Glu	Val	Asn	Val	Ile	Pro	Pro	His	Thr	Pro	Val	Arg	Thr	Val	Met	
246		365					370					375					
248	AAC	ACT	ATC	CAA	CAA	TTA	ATG	ATG	ATT	TTA	AAT	TCA	GCA	AGT	GAT	CAA	1323
249	Asn	Thr	Ile	Gln	Gln	Leu	Met	Met	Ile	Leu	Asn	Ser	Ala	Ser	Asp	Gln	
250	380					385					390					395	
252	CCT	TCA	GAA	AAT	CTG	ATT	TCC	TAT	TTT	AAC	AAC	TGC	ACA	GTG	AAT	CCA	1371
253	Pro	Ser	Glu	Asn	Leu	Ile	Ser	Tyr	Phe	Asn	Asn	Cys	Thr	Val	Asn	Pro	
254				400						405					410		
256	AAA	GAA	AGT	ATA	CTG	AAA	AGA	GTG	AAG	GAT	ATA	GGA	TAC	ATC	TTT	AAA	1419
257	Lys	Glu	Ser	Ile	Leu	Lys	Arg	Val	Lys	Asp	Ile	Gly	Tyr	Ile	Phe	Lys	
258				415					420						425		
260	GAG	AAA	TTT	GCT	AAA	GCT	GTG	GGA	CAG	GGT	TGT	GTC	GAA	ATT	GGA	TCA	1467
261	Glu	Lys	Phe	Ala	Lys	Ala	Val	Gly	Gln	Gly	Cys	Val	Glu	Ile	Gly	Ser	
262			430					435					440				
264	CAG	CGA	TAC	AAA	CTT	GGA	GTT	CGC	TTG	TAT	TAC	CGA	GTA	ATG	GAA	TCC	1515
265	Gln	Arg	Tyr	Lys	Leu	Gly	Val	Arg	Leu	Tyr	Tyr	Arg	Val	Met	Glu	Ser	
266		445					450					455					
268	ATG	CTT	AAA	TCA	GAA	GAA	GAA	CGA	TTA	TCC	ATT	CAA	AAT	TTT	AGC	AAA	1563
269	Met	Leu	Lys	Ser	Glu	Glu	Glu	Arg	Leu	Ser	Ile	Gln	Asn	Phe	Ser	Lys	
270	460					465					470					475	
272	CTT	CTG	AAT	GAC	AAC	ATT	TTT	CAT	ATG	TCT	TTA	TTG	GCG	TGC	GCT	CTT	1611
273	Leu	Leu	Asn	Asp	Asn	Ile	Phe	His	Met	Ser	Leu	Leu	Ala	Cys	Ala	Leu	
274				480						485					490		
276	GAG	GTT	GTA	ATG	GCC	ACA	TAT	AGC	AGA	AGT	ACA	TCT	CAG	AAT	CTT	GAT	1659
277	Glu	Val	Val	Met	Ala	Thr	Tyr	Ser	Arg	Ser	Thr	Ser	Gln	Asn	Leu	Asp	

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/028,726

DATE: 03/04/2003

TIME: 07:48:26

Input Set : N:\Crf3\RULE60\10028726.RAW.txt

Output Set: N:\CRF4\03042003\J028726.raw

L:34 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:35 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:41 M:238 W: Alpha Fields not Ordered, Reordered [(C) CLASSIFICATION:] of (1)(vi)